



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,606	09/24/2003	Hyong-Yerl Park	8734.233.00 US	1510
30827	7590	05/01/2006	EXAMINER	
MCKENNA LONG & ALDRIDGE LLP 1900 K STREET, NW WASHINGTON, DC 20006			DHARIA, PRABODH M	
			ART UNIT	PAPER NUMBER
			2629	

DATE MAILED: 05/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because total word count exceeds 150.

Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1,2,4,5,7,11,12,14,16 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Lim (US 2002/0039089 A1).

Regarding Claim 1, Lim teaches a liquid crystal display device (page 1, paragraph 5, Line 1, Lines 3-5, paragraphs 13,16, page 3, paragraph 39), comprising: an image display part formed on a first substrate where data lines and gate lines are vertically and horizontally arranged, respectively, to intersect each other (page 1, paragraph 5, Line 3-5 paragraph 13, Lines 1-5); a plurality of gate tape carrier packages having a gate driving integrated circuit for driving the gate lines (page 1, paragraph 13, Lines 6-9, paragraph 16, Lines 3-5); a plurality of data tape carrier packages having a data driving integrated circuit for driving the data lines (page 1, paragraph 13, Lines 6-9, paragraph 16, Lines 1,2); a plurality of conductive lines formed at an outer side of the image display part of the first substrate for supplying gate driving signals to the gate driving integrated circuits (page 1, paragraph 13, Lines 6-10); a first control signal line formed together with the conductive lines for supplying a first control signal to the gate driving integrated circuits so that the gate lines of the image display part may be sequentially driven from the first one to the last one (page 1, paragraph 16); a second control signal line formed together with the conductive lines for supplying a second control signal to the gate driving integrated circuits so that the gate lines of the image display part may be sequentially driven from the last one to the first one (page 3, paragraph 39, Lines 4-10); and a first controller for supplying the first and second control signals to the first and second control signal lines (page 1, paragraph 16, page 3, paragraph 39, Lines 4-10).

Regarding Claim 2, Lim teaches the first control signal line transmits a gate start pulse (GSP) (page 1, paragraph 16).

Regarding Claim 4, Lim teaches the first controller transmits a third control signal to the first data driving IC and the last data driving IC to sequentially apply image information from the first data driving IC to the last data driving IC or from the last data driving IC to the first data driving IC (page 1, paragraph 16, page 3, paragraph 39, Lines 4-10).

Regarding Claim 5, Lim teaches a method of driving a liquid crystal display device (page 2, paragraph 33), comprising: providing a plurality of gate tape carrier packages having a gate driving integrated circuit for driving a plurality of gate lines (page 2, paragraph 34, Lines 7-9); providing a plurality of data tape carrier packages having a data driving integrated circuit for driving a plurality of data lines (page 2, paragraph Lines 4-6); providing a plurality of conductive lines at an outer side of an image display part of a first substrate for supplying gate driving signals to the gate driving integrated circuits (page 2, paragraph 35, Lines 1,2); and supplying a first control signal to the gate driving integrated circuits using a first control line so that the gate lines of the image display part may be sequentially driven from the last one to the first one (page 3, Paragraph 39, Lines 4-10).

Regarding Claim 9, Lim teaches the first control signal line transmits a gate start pulse (GSP) (page 2, paragraph 36, Lines 1-4).

Regarding Claim 7, Lim teaches supplying a second control signal to the data driving integrated circuits using a second control line so that the data lines of the image display part may be sequentially driven from the last one to the first one (page 3, paragraph 39, Lines 4-10).

Regarding Claim 11, Lim teaches the first controller transmits a third control signal to the first data driving IC and the last data driving IC to sequentially apply image information from the first data driving IC to the last data driving IC or from the last data driving IC to the first data driving IC (figure 3, page 2, paragraphs 34-36).

Regarding Claim 12, Lim teaches a method of driving a liquid crystal display device (page 2, paragraph 33, page 1, paragraph 5, Line 1, Lines 3-5, paragraphs 13,16, page 3, paragraph 39), comprising: an image display part formed on a first substrate where data lines and gate lines are vertically and horizontally arranged, respectively, to intersect each other (page 1, paragraph 5, Line 3-5 paragraph 13, Lines 1-5); a plurality of gate tape carrier packages having a gate driving integrated circuit for driving the gate lines (page 1, paragraph 13, Lines 6-9, paragraph 16, Lines 3-5); a plurality of data tape carrier packages having a data driving integrated circuit for driving the data lines (page 1, paragraph 13, Lines 6-9, paragraph 16, Lines 1,2); a plurality of conductive lines formed at an outer side of the image display part of the first substrate for supplying gate driving signals to the gate driving integrated circuits (page 1, paragraph 13, Lines 6-10); a first control signal line formed together with the conductive lines for supplying a first control signal to the gate driving integrated circuits so that the gate lines of the image display part may be sequentially driven from the first one to the last one (page 1, paragraph 16); a second control signal line formed together with the conductive lines for supplying a second control signal to the gate driving integrated circuits so that the gate lines of the image display part may be sequentially driven from the last one to the first one (page 3, paragraph 39, Lines 4-10); and a first controller for supplying the first and second control signals

Art Unit: 2629

to the first and second control signal lines (page 1, paragraph 16, page 3, paragraph 39, Lines 4-10).

Regarding Claim 14, Lim teaches supplying a second control signal to the data driving integrated circuits using a second control line so that the data lines of the image display part may be sequentially driven from the last one to the first one (page 3, paragraph 39, Lines 4-10).

Regarding Claim 16, Lim teaches the first control signal line transmits a gate start pulse (GSP) (page 2, paragraph 36, Lines 1-4).

Regarding Claim 18, Lim teaches the first controller transmits a third control signal to the first data driving IC and the last data driving IC to sequentially apply image information from the first data driving IC to the last data driving IC or from the last data driving IC to the first data driving IC (figure 3, page 2, paragraphs 34-36).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 6,8,13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lim (US 2002/0039089 A1) as applied to claim 1,2,4,5,7,11,12,14,16,18 above, and further in view of Aoki (US 5,966,115).

Regarding Claim 6, Lim teaches the gate lines of the image display part may be sequentially driven from the last one to the first one (page 3, paragraph 39, Lines 4-10); an image produced by supplying the first control signal is inverted (page 3, paragraph 39, Lines 13-18).

However, Lim fails to specifically recite or disclosed an image produced by supplying the first control signal is inverted.

However, Aoki teaches an image produced by supplying the first control signal is inverted (Col. 1, Line 65 to Col. 2, Line 6).

Thus it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the teaching of Aoki in the teaching of Lim to be able to have a display driver using a scan line drive means be able to display vertically inverted image on display panel.

Regarding Claim 8, Lim fails to specifically recite or disclosed an image produced by supplying the first control signal is inverted.

However, Aoki teaches an image produced by supplying the first control signal is inverted (Col. 1, Line 65 to Col. 2, Line 6).

Thus it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the teaching of Aoki in the teaching of Lim to be able to have

Art Unit: 2629

a display driver using a scan line drive means be able to display vertically inverted image on display panel.

Regarding Claim 13, Lim teaches the gate lines of the image display part may be sequentially driven from the last one to the first one (page 3, paragraph 39, Lines 4-10); an image produced by supplying the first control signal is inverted (page 3, paragraph 39, Lines 13-18).

However, Lim fails to specifically recite or disclosed an image produced by supplying the first control signal is inverted.

However, Aoki teaches an image produced by supplying the first control signal is inverted (Col. 1, Line 65 to Col. 2, Line 6).

Thus it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the teaching of Aoki in the teaching of Lim to be able to have a display driver using a scan line drive means be able to display vertically inverted image on display panel.

Regarding Claim 15, Lim teaches the gate lines of the image display part may be sequentially driven from the last one to the first one (page 3, paragraph 39, Lines 4-10); an image produced by supplying the first control signal is inverted (page 3, paragraph 39, Lines 13-18).

However, Lim fails to specifically recite or disclosed an image produced by supplying the first control signal is inverted.

However, Aoki teaches an image produced by supplying the first control signal is inverted (Col. 1, Line 65 to Col. 2, Line 6).

Thus it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the teaching of Aoki in the teaching of Lim to be able to have a display driver using a scan line drive means be able to display vertically inverted image on display panel.

Allowable Subject Matter

7. Claims 3,10,17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is an examiner's statement of reasons for allowance:

A liquid crystal display device, comprising: an image display part formed on a first substrate where data lines and gate lines are vertically and horizontally arranged, respectively, to intersect each other; a plurality of gate tape carrier packages having a gate driving integrated circuit for driving the gate lines; a plurality of data tape carrier packages having a data driving integrated circuit for driving the data lines; a plurality of conductive lines formed at an outer side of the image display part of the first substrate for supplying gate driving signals to the gate driving integrated circuits; **a first control signal line formed together with the conductive lines for supplying a first control signal** to the gate driving integrated circuits so that the gate lines of the image display part may be sequentially driven from the first one to the last one; a **second control signal line formed together with the conductive lines for supplying a second control signal** to the gate driving integrated circuits so that the gate lines of the image display

Art Unit: 2629

part may be sequentially driven from the last one to the first one; and a first controller for supplying the first and second control signals to the first and second control signal lines **and providing a shorting line at an edge of the first substrate to electrically connect an end of the first control signal line and an end of the second control signal line extended from the last gate driving IC.**

Cited references on 892's fails to recite or disclose bold underlined claim above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Park et al. (US 2005/0088602 A1) Liquid Crystal Display Panel of line on glass type and method of fabricating the same.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prabodh M. Dharia whose telephone number is 571-272-7668. The examiner can normally be reached on M-F 8AM to 5PM.

11. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2629

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this action should be mailed to:

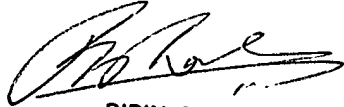
Commissioner of Patents and Trademarks

Washington, D.C. 20231

PD

AU2629

April 24, 2006


BIPIN SHALWALA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600